

[DYNAMIC SOCIAL GROUPING AND ROUTING IN SENSOR NETWORKS](#), GEORGE D. RUSH¹, ABBEY TROTTA², ROY CABANISS¹, SRINIVASA S. VULLI¹, SANJAY MADRIA*¹, MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY¹, DEPARTMENT OF COMPUTER SCIENCE, ROLLA, MO 65409, UNIVERSITY OF MISSOURI-KANSAS CITY², DEPARTMENT OF COMPUTER SCIENCE, KANSAS CITY, MO, 64110, MADRIAS@MST.EDU

Mobile Ad-hoc networks are a collection of computing devices connected through wireless communications, such as Bluetooth or wireless LAN. They are characterized by the mobility and dynamic nature of the devices, referred to as nodes. Mobility of the nodes makes conventional routing algorithms ineffective or inapplicable, and to accommodate, new routing methods have been developed. As a general rule, the algorithm is more effective when it has more information regarding the mobility patterns of nodes. Conventional probabilistic routing schema assumes consistent avenues of communication – nodes which interact with a set group of nodes in the past will do so again in the future. Similarly, social routing assumes that nodes that are assigned to the same social network (classroom, project team) will regularly interact with members of that social group. To take advantage of the partial applicability of both social and probabilistic routing, a combination of these methods was used to design the Dynamic Social Grouping (DSG) algorithm. This algorithm is designed to be used for delay tolerant social networks, where the message delivery ratio is of greater importance than the time required for message delivery.